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Brexit: An Econometric Analysis

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Abstract:

Brexit: An Econometric Analysis
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Over the last decade or so, the environment of both politics and economics has come to a period of transition that is filled with uncertainty. Today, we find ourselves in a G-Zero climate where no specific country nor economic bloc, truly leads or leverages itself as a global leader. The prevalence of globalization has certainly contributed to this state of affairs. Now, we see political movements in countries that previously led the world, emerging and growing, viewing their demise in international power as an opportunity to take their country back, in hopes, that it will allow them to secure a safer future. Most notably, Great Britain has found itself at the forefront of this issue and now face the difficult decision of either leaving or staying as a member of the European Union. However, this reaction to decades of entrenched economic policies and institutions will only further disadvantage their current position. Using econometric modeling, I estimate the effect of EU membership in Britain and characterize how Brexit will negatively impact the United Kingdom's economy.

We know from neoclassical economic theory that GDP can be gauged using the Aggregate Demand (AD) and Aggregate Supply (AS) model If either AD or AS shift outward, we expect GDP to increase. If either AD or AS shift inward, we expect GDP to decrease. Using an

AD/AS graph, we would expect Brexit to cause inward shifts on both AD and AS. For example, Aggregate Supply would be impacted significantly as access to markets and movement of free labor decline. This would cause consumption, investment spending and possibly net exports to fall. In response, we expect the AD curve to shift inward as well. The inward shift of both these curves may even cause stagflation as both GDP decrease and price levels increase. This makes sense, in a post-Brexit world, transportation costs and labor wages should increase as barriers of trade are re-established and supply of labor declines.

My econometric analysis explores this theoretical negative impact of Brexit on Britain's GDP by utilizing macroeconomic data from the Organization for Economic Co-operation and Development (OECD) from 1960 to 2017. By designing a model that accounts for various factors of GDP growth and additionally taking exogenous factors into account, I will compare GDP growth between Great Britain and the Republic of Ireland. Great Britain joined the European Union (EU) in 1973 while the Republic of Ireland remained independent. By using a difference in difference estimation, I will difference the EU coefficient and capture its impact. Results will be discussed in terms of the implications of Brexit both theoretically and statistically and the role it will play in our near future as an example of how significant economic policy can be. Today, we face an uncertain future where globalization, automatization, offshoring, exponential technological growth and deepening socioeconomic inequality strike fear in the minds of many, but, I believe, our greatest chance for prosperity lies in our ability to implement solutions synergistically. A weakening of countries that leave the EU should incentivize current members to stay; however, if Britain's economic consequences are relatively small, does that mean that the EU might be doomed?